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Azotobacter.—STOKLASA and his assistants have been cultivating *Azotobacter chroococcum* and *Radiobacter* sp. to determine the fixation of nitrogen and the fermentative respiratory activity.²⁶ They do not confirm BEIJERINCK's assertion that *Radiobacter* fixes free N, nor that *Azotobacter* in company therewith fixes more N than in pure culture. They conceive the fermentation of the mannits and of glucose by *Azotobacter* to be wrought by glycolytic enzymes which split them into lactic, acetic, and formic acids and alcohol. By the decomposition of these, CO₂ and H₂ are produced, the former at greater rate than in any organisms previously known. Thus 1^{gm} of *Azotobacter*, dry weight, produces on an average 1.3^{gm} CO₂ in 24 hours. The H₂ is believed to have an important rôle in the fixation of N.—C. R. B.

Subalpine scrub in New Zealand.—COCKAYNE²⁷ has named the distinct zone of plants on many New Zealand mountains between the limit of the forest and the subalpine meadow the "subalpine scrub." On Mount Fyffe this formation differs from the typical one in the paucity of species and in the great domination of *Cassinia albida*, a species peculiar to that locality, in places being almost a pure formation. *Ranunculus lobulatus*, another local species, is the principal plant beneath the scrub. Some of the shrubs are strongly xerophytic; and the author thinks that the amount of xerophyly observed in many New Zealand plants is by no means a measure of their adaptation to present environment, but rather a survival from previous more xerophytic conditions.—J. M. C.

Monoecism of *Funaria hygrometrica*.—BOODLE²⁸ has undertaken to settle the contradictory statements in reference to the distribution of the male and female organs of this species. It seems that bryological works describe it as monoecious; and that certain general textbooks speak of it as dioecious. It turns out that the bryologists are right, as might have been expected. "The male axis bears a terminal male flower, and produces a lateral branch (innovation) which forms a terminal female flower. The female branch may be inserted at different levels, sometimes high up, sometimes basally; it usually has a tuberous base bearing a tuft of rhizoids, and if torn away appears like an independent plant."—J. M. C.

Color of algae.—GAIDUKOV exposed the blue-green plates of *Phormidium* and the red *Porphyra* to the spectrum of a strong electric light.²⁹ In ten hours under all the green to violet rays the color had become yellow to brown-yellow,

²⁶ STOKLASA, J., et al., Ueber die chemischen Vorgänge bei der Assimilation des elementaren Stickstoffes durch *Azotobacter* und *Radiobacter*. Ber. Deutsch. Bot. Gesells. 24:22-32. 1906.

²⁷ COCKAYNE, L., Notes on the subalpine scrub of Mount Fyffe. Trans. N. Z. Inst. 38: 361-374. 1906.

²⁸ BOODLE, L. A., The monoecism of *Funaria hygrometrica* Sibth. Annals of Botany 20:293-299. 1906.

²⁹ GAIDUKOV, N., Die komplementäre chromatische Adaptation bei *Porphyra* und *Phormidium*. Ber. Deutsch. Bot. Gesells. 24:1-5. 1906.